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 Reply to Office Action of January 30, 2007

# REMARKS

Claims 1 to 14 are currently pending in the present application. Claims 1, 8, 11, 13 and 14 are amended herein. Claims 9 and 10 are cancelled. Claim 15 is newly added. No new matter is added by the amendments or the new claim.

Claims 8 to 12 and 14 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter Applicants regard as the invention. Specifically, in claim 8, the substituents "X", "Y" and "Z", and the subscripts "p", "q" and "r" are not defined. Claim 8 has been amended to claim:

A medical apparatus comprising at least one surface which includes a hydrolytically condensed organosilane sol-gel iodine-resistant coating comprised from a material with the formula  $\text{SiX}_p\text{Y}_q\text{Z}_r$ , wherein X is a hydrolytically condensable substituent, Y is a polymerizable substituent R-A, wherein R is an alkylene or arylalkylene, and A is selected from the group comprising halogen, amino, amide, aldehyde, alkylcarbonyl, carboxy, thio, cyano, alkoxy, alkoxycarbonyl, sulfonic acid, phosphoric acid, acryloxy, methacryloxy, epoxy or vinyl, and Z is a hydrolytically non-condensable and non-polymerizable substituent, and wherein p is equal to 2, 3, or 4, q is equal to 0, 1, or 2, and r is equal to 0 or 1.

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It is respectfully submitted that claim 8, which now incorporates the limitations of cancelled claims 9 and 10, properly complies with the requirements of 35 U.S.C. 112, second paragraph. It is also submitted that claims 11 and 12, which depend from amended claim 8 also properly comply with the requirements of 35 U.S.C. 112, second paragraph.

Claim 14 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter Applicants regard as the invention. Specifically, claim 14 fails to describe the formula claimed. Claim 14 has been amended to claim:

The process of claim 13 wherein said sol-gel material is a glossy material comprising:

demi-water,  
itaconic acid,  
ethyl alcohol,  
tetraethoxysilane,  
glycidoxypopyl trimethoxysilane,  
silica dispersion, and  
wetting agent.

It is respectfully submitted that claim 14 now properly complies with the requirements of 35 U.S.C. 112, second paragraph. Withdrawal of the rejections of claims 8 to 12 and 14 under 35 U.S.C. 112, second paragraph is earnestly requested.

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Claims 1 to 3, 5, 8 to 11, 13 and 14 stand rejected by the Action under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application No. 2004/0029834 to Schiestel et al. (hereinafter "Schiestel"). Claim 9 and 10 are cancelled, accordingly the rejection of claims 9 and 10 is moot. Applicants respectfully submit that Schiestel does not expressly or inherently disclose all of the elements set forth in independent claims 1, 8 and 13. Thus, Schiestel does not anticipate claims 1, 8 and 13 or claims 2 to 3, 5, 9 to 11 and 14, which depend therefrom.

It is an object of the present invention to provide an item of medical equipment, which is at least partially provided with a coating of a sol-gel composition. The invention is particularly useful for tabletops of diagnostic systems that come in contact with iodine-containing solutions, such as contrast solutions, medical cleaning solutions, disinfectants, and the like. The sol-gel hybrid coating of the present invention provides stain resistance from iodine solutions and further provides high mechanical, chemical, and heat resistance. Accordingly, claim 1 claims a medical apparatus comprising at least one surface which is at least partially coated with a hydrolytically condensed organosilane sol-gel composition, wherein the composition provides iodine resistance.

Claim 1 now clearly claims that the coating is made of a hydrolytically condensed organosilane sol-gel composition. An organosilane compound or a substituent contained therein is considered to be hydrolytically condensable when the compound contains a silanol group, -Si-OH, or when a silanol group can be formed from said compound by using water, and two silanol groups can react to form an Si-O-Si bond while eliminating

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water. When these reactions have (partially) taken place, then the compound is (partially) hydrolytically condensed.

Schiestel does not disclose a means for providing stain resistance to an article of medical equipment. Rather, Schiestel is directed to coated articles, especially containers, whose coating comprises an organically modified inorganic matrix comprising silver colloids for microbicidal effect. Accordingly, Schiestel discloses a coating composition comprising a) a hydrolysate or condensate based on at least one hydrolysable silane with at least one non-hydrolysable (carbon-containing) substituent and b) a silver compound. Schiestel does not disclose an iodine-resistant coating made of a hydrolytically condensed organosilane sol-gel composition for providing stain resistance from iodine solutions. Accordingly, for at least this reason, independent claim 1 is patentable over Schiestel.

Independent claims 8 and 13, similar to claim 1, also claim an iodine-resistant coating made of a hydrolytically condensed organosilane sol-gel composition for providing stain resistance from iodine solutions. Accordingly, claims 8 and 13 are patentable over Schiestel for at least the reasons discussed with respect to claim 1.

Dependent claims 2, 3, 5, 11 and 14 depend from claims 1, 8 and 13 and provide further features, thus claims 2, 3, 5, 11 and 14 are clearly distinguishable over Schiestel for at least the reasons discussed with respect to claim 1. Accordingly, the Applicants

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respectfully request that the rejections under 35 U.S.C. § 102(e) of claims 1 to 3, 5, 8 to 11, 13 and 14 be withdrawn.

Claims 4, 7 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schiestel. Claims 1 and 8, from which claims 5, 7 and 12 depend, now claim a hydrolytically condensed organosilane sol-gel composition, wherein the composition provides iodine resistance. As discussed, Schiestel does not disclose an iodine-resistant coating made of a hydrolytically condensed organosilane sol-gel composition for providing stain resistance from iodine solutions. In order to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). As discussed above, the cited combination fails to suggest all elements of claims 1 and 8, as amended. Thus, claims 4, 7 and 12 are patentable over Schiestel for at least the reasons discussed with respect to claims 1 and 8.

Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Schiestel in view of U.S. Patent Application No. 2003/0157344 to Shoup et al. (hereinafter "Shoup"). Applicants respectfully point out that Shoup, similar to Schiestel, fails to disclose an iodine-resistant coating made of a hydrolytically condensed organosilane sol-gel composition for providing stain resistance from iodine solutions, as is now claimed by claim 1, from which claim 6 depends. Thus, the combination of Schiestel and Shoup fails to disclose all of the claim limitations of claim 1, let alone

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claim 6. Accordingly, it is submitted that claim 6 is patentable over the combination of Shoup and Schiestel.

Accordingly, allowance of claims 1 to 8 and 11 to 15 is earnestly solicited.

### **Conclusion**

In view of the foregoing, Applicants respectfully submit that the specification, the drawings and all claims presented in this application are currently in condition for allowance. Accordingly, Applicants respectfully request favorable consideration and that this application be passed to allowance.

Should any changes to the claims and/or specification be deemed necessary to place the application in condition for allowance, the Examiner is respectfully requested to contact the undersigned to discuss the same.

Applicants' representative believes that this response is being filed in a timely manner. In the event that any extension and/or fee is required for the entry of this amendment the Commissioner is hereby authorized to charge said fee to Deposit Account No. 14-1270. An early and favorable action on the merits is earnestly solicited.


If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call David Barnes,

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Esq., Intellectual Property Counsel, Philips North America Corporation at the number  
below.

Respectfully submitted,

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